UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS

AND INTERFERENCES

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Ex parte JEFFREY SCOTT EDER

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Appeal 2007-2745

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Application 09/761,671

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Technology Center 3600

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Decided: August 29, 2007

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Before TERRY J. OWENS, HUBERT C. LORIN, and ANTON W. FETTING,

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Administrative Patent Judges.

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FETTING, *Administrative Patent Judge.*

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DECISION ON APPEAL

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STATEMENT OF CASE

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Jeffrey Scott Eder (Appellant) seeks review under 35 U.S.C. § 134 of a Final

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rejection of claims 69-103, the only claims pending in the application on appeal.

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We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6.

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We AFFIRM.

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1   The Appellant invented a way to calculate and display a forecast of the impact

2   of user-specified or system generated changes in business value drivers on the

3   other value drivers, the elements, the components, the financial performance and

4   the long term value of a commercial enterprise that utilizes the information from a

5   detailed valuation of the enterprise (Specification 9:2-7).

6   An understanding of the invention can be derived from a reading of exemplary

7   claim 69, which is reproduced below [bracketed matter and some paragraphing

8   added].

9   69. A current operation modeling method, comprising:

10   [1]

11   [a] integrating transaction data

12   [i] for a commercial enterprise

13   [ii] in accordance with a common data dictionary;

14   [b] using a neural network model

15   [i] to identify one or more value driver candidates

16   [ii] for each of one or more elements of value from said data,

17   [c] using an induction model

18   [i] to identify one or more value drivers from said candidates

19   and

20   [ii] define a contribution summary

21   [1] for each element of value

22   [2] for each of one or more aspects of a current operation

23   financial performance

24   [3] using said value drivers, and

25   [d] creating a plurality of network models

26   [i] that connect the elements of value

27   [ii] to aspects of current operation financial performance

1   [iii] using said contribution summaries

2   [2]

3   [a] where the elements of value are selected from the group consisting
4   of

5   [i] brands,

6   [ii] customers,

7   [iii] employees,

8   [iv] intellectual capital,

9   [v] partners,

10   [vi] vendors,

11   [vii] vendor relationships and

12   [viii] combinations thereof,

13   [b] where the induction models are selected from the group consisting
14   of

15   [i] lagrange,

16   [ii] path analysis and

17   [iii] entropy minimization,

18   [c] where the network models support automated analysis through
19   computational techniques and

20   [d] where the aspects of current operation financial performance are
21   selected from the group consisting of

22   [i] revenue,

23   [ii] expense,

24   [iii] capital change,

25   [iv] cash flow,

26   [v] future value,

27   [vi] value and

28   [vii] combinations thereof.

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2   This appeal arises from the Examiner's Final Rejection, mailed June 13, 2006.

3   The Appellant filed an Appeal Brief in support of the appeal on October 3, 2006.

4   An Examiner's Answer to the Appeal Brief was mailed on January 9, 2007. A

5   Reply Brief was filed on January 27, 2007.

6   PRIOR ART

7   The Examiner relies upon the following prior art:

8   Daniel W. Bielinski, *How to sort out the premium drivers of post-deal value*,

9   Mergers and Acquisitions, Jul/Aug 1993, Vol. 28, Iss. 1, pg. 33, 5 pgs. (Bielinski)

10   Carol E. Brown, James Coakley, and Mary Ellen Phillips, *Neural networks enter*

11   *the world of management accounting*, Management Accounting, May 1995, Vol.

12   76, Iss. 11, p. 51, 5 pgs. (Brown)

13   The Appellant relies upon the following prior art, already of record:

14   Alfred Rappaport, *Creating Shareholder Value*, A Guide for Managers and

15   Investors, pp. 39, 70, 171, and 172, ISBN 0-684-84410-9, 1998 (Rappaport)

16   REJECTION

17   Claims 69-103 stand rejected under 35 U.S.C. § 103(a) as unpatentable over

18   Bielinski and Brown.

19   ISSUES

20   Thus, the issue pertinent to this appeal is whether the Appellant has sustained

21   its burden of showing that the Examiner erred in rejecting claims 69-103 under

22   35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown.

1   FACTS PERTINENT TO THE ISSUES

2   The following enumerated Findings of Fact (FF) are believed to be supported

3   by a preponderance of the evidence.

4   *Claim Construction*

5   01.   Entropy minimization is an induction algorithm that, starting with

6   nothing, adds variable to composite variable formula as long as they

7   increase the explainability [sic] of result (Specification, 47:Table 23).

8   02.   LaGrange is an induction algorithm that is designed to identify the

9   behavior of dynamic systems and uses linear regression of the time

10   derivatives of the system variables (Specification, 47:Table 23).

11   03.   Path Analysis is an induction algorithm that is essentially equivalent

12   to multiple linear regression that finds the least squares rule for more

13   than one predictor variable (Specification, 47:Table 23).

14   *Bielinski*

15   04.   Bielinski is directed towards describing how Value Based

16   Management (VBM), an advancement in discounted cash flow

17   modeling, centers on what specific steps can be taken operationally and

18   strategically to add value to a target organization (Bielinski, 1:Abstract).

19   05.   Bielinski describes how sensitivity analysis of past results offers clues

20   to what can be done in the future and which value drivers should receive

21   the most attention to achieve optimal rewards. The VBM technique

22   allows the analyst to figure key decision making trade-offs, since

23   attention to one driver may generate negative effects on others or 2 or

1   more drivers may have to be varied in concert to produce the best results

2   (Bielinski, 1:Abstract).

06.   Bielinski describes Value-Based Management (VBM), which keys on

4   a target's historical operations rather than future projections. VBM also

5   can calculate the results of trade-offs when decision makers must choose

6   between a series of factors that can be changed to enhance post

7   acquisition value (Bielinski, 1:Bottom ¶ - 2:Top line).

07.   Bielinski describes the best-known valuation tool designed to

9   facilitate value creation and cash flow enhancement as Shareholder

10   Value Analysis (SVA), introduced in the 1980s by Prof. Alfred

11   Rappaport of Northwestern University (Bielinski, 2:First full ¶).

08.   SVA may be defined as a two-step process. First, a discounted cash

13   flow business valuation is performed. A projection of future cash flow

14   (including a residual) is developed and discounted at an appropriate rate,

15   usually the cost of capital, to arrive at an indicated value. Second, key

16   factors (or value drivers), such as growth, profit margins, etc., are varied

17   systematically to test the sensitivity of the indicated business value to

18   each driver. Standard SVA sensitivity analysis changes each value driver

19   plus or minus 1%, although analysts now often use "relevant ranges" and

20   different percentages for upside and downside swings to reflect

21   prevailing business realities (Bielinski, 2:First full ¶).

09.   SVA has limitations often magnified into constraints that necessitate

23   modifying standard SVA analysis. Thus, Rappaport describes and

24   distinguishes VBM, a first cousin to SVA, which has resulted from these

25   modifications. Bielinski provides an abbreviated overview of VBM and

1 describes how it differs from the traditional SVA framework (Bielinski,

2 2:Second and third full ¶'s).

3 10. Rather than use projections of future cash flow like SVA, the VBM

4 framework utilizes historical cash flow. Five years of historical cash

5 flow are added up to arrive at a cumulative baseline cash flow number.

6 That is in contrast to SVA's method of discounting future cash flows to

7 reach an indicated value. Instead of testing the sensitivity of a value

8 based on a projection, VBM tests the sensitivity of the historical cash

9 flow. VBM tells the executive how much more or less cash flow would

10 be in the bank today if certain events had occurred differently or if the

11 company had operated differently in the past five years (Bielinski,

12 2:Fifth and sixth full ¶'s).

13 11. The use of actual historical data, rather than projections, has proven

14 useful in testing the impact of alternative scenarios against the reality of

15 actual events. It also has served as a catalyst to identify and implement

16 actions that generate improvements. As long as a company's

17 fundamental structure does not change going forward, the results provide

18 meaningful insight regarding the probable outcomes of future strategic

19 action, to the extent that risk is not increased, an executive may

20 reasonably assume that an increase from historical cash flow trends

21 likely would translate into enhanced value (Bielinski, 2:Seventh full ¶).

22 12. VBM utilizes drivers that are more directly linked to operations. For

23 example, rather than use operating profit margin as a broad value driver,

24 a VBM analysis on a manufacturer would include a breakdown of cost

25 of goods sold by key components (Bielinski, 2:Eighth full ¶).

13. Bielinski provides an example of a mix for VRM analysis including materials, human resources, technology and capital, and other costs of goods sold as value drivers (Bielinski, 2:Bottom five full ¶'s).

14. VBM essentially utilizes SVA principles but advances the basic techniques by incorporating historical data, operations-linked value drivers, and concurrent changes in multiple value-drivers (Bielinski, 3:Third full ¶).

15. Bielinski shows the sensitivity of the baseline cash flow to changes in key factors. Showing how results might have turned out differently if operating or strategic changes been effected in the recent past suggests improvements that can be made in the future (Bielinski, 3:Sixth full ¶).

16. Sensitivity analysis can show how changes in key cost and operating components can impact cash flow. One striking conclusion is that the areas where the big dollars are do not always offer the greatest opportunities to improve cash flow and value (Bielinski, 3:Seventh and eighth full ¶).

17. Bielinski describes how SVA can tie strategic changes directly to manufacturing by future initiatives to control costs, eliminating overspecification and establishing better value chain management (Bielinski, 3:Bottom ¶).

18. And if both the acquirer and target utilize VBM in constructing a projection, the two sides might come close to reaching a consensus on what constitutes a "realistic" projection of future performance (Bielinski, 4:Bottom ¶).

19. With VBM, sensitivity analysis of past results offers clues to what can be done in the future and which value drives - e.g., sales growth, profit margins, productivity, etc. - should receive the most attention to achieve the optimal rewards. Additionally, the VBM technique allows the analyst to figure key decision making trade-offs, since attention to one driver may generate negative effects on others or two or more drivers may have to be varied in concert to produce the best results (Bielinski, 5:Keys to creating value).

Brown

20. Brown is an accounting journal article describing how artificial intelligence (AI) is implemented in business practices. Three of the most common methods parallel the way people reason: rules (inference procedures), cases (case-based reasoning), and pattern matching (neural networks). These methods may be used separately or in combination and currently are being used to solve a variety of business tasks (Brown 51:Left col., Bottom ¶ - Center col.).

21. Neural networks use pattern matching. The financial services industry with its large databases has fielded several successful neural network applications, and neural networks based on information about customers or potential customers have proved effective. If large databases exist with which to train a neural network, then use of that technology should be considered. For a neural network the large database can be used as the equivalent of the human expert (Brown 52:Center col., Second ¶).

22. Neural networks are used for forecasting future sales and prices, estimating future costs, and planning future schedules and expenditures (Brown 53:Left col., Forecasting and Scheduling).

23. An air carrier's improved scheduling makes aircraft operations more predictable, reduces delays, and reduces fuel costs by shortening the time aircraft spend waiting for available gates. More efficient scheduling raises the number of flights by each aircraft, increases revenue, provides better management of disruptions, and improves passenger service (Brown 53:Left col.-middle col., Forecasting and Scheduling).

24. A provider of hospital supplies, uses a neural network to identify the key characteristics of the best customers and searches the inactive customer list for the highest probability purchasers from those who are inactive. Neural networks also help with customer service and support (Brown 53:Center col., First full ¶).

25. As businesses reorganize based on customer needs, neural networks can help them analyze past business transactions so they can understand their customers' buying patterns. One neural network for database mining has been tailored for database marketing (Brown 53:Center col., Second full ¶).

26. Many systems also have been developed to help investors and investment companies manage investments in securities. One company has a neural network it uses as a decision aid in stock purchases for mutual funds. The neural network makes a very accurate forecast about 10% of the time; the other 90% of the time it makes no forecast at all. Another company uses a neural network to manage the $100 million

1   equity portfolio of its pension fund. Forty indicators are used to rank the

2   expected future returns of 1,000 equities. Currently owned stocks are

3   sold and are replaced by those with future return rating over a certain

4   cutoff, which results in an 80% monthly turnover. The portfolio return,

5   net of transaction costs, exceeds that of the Standard & Poor's 500 index.

6   Other firms use neural network to predict the S & P 500 index and the

7   performance of stocks and bonds to help market traders in making their

8   buy, hold, and sell decisions. The system recognizes patterns in market

9   activity before they are apparent to a human, which may mean millions

10   in trading profits (Brown 56:Center col., Investments).

11   *Rappaport*

12   27. Rappaport describes techniques for creating shareholder value

13   (Rappaport Title).

14   28. A component of the cost of equity is a risk premium. One way of

15   estimating the risk premium for a particular stock is by computing the

16   product of the market risk premium for equity (the excess of the

17   expected rate of return on a representative market index such as the

18   Standard & Poor's 500 stock index over the risk-free rate) and the

19   individual security's systematic risk, as measured by its beta coefficient

20   (Rappaport 39:Middle full ¶).

21   29. Rappaport teaches that three factors determine stock prices: cash

22   flows, a long-term forecast of these cash flows, and the cost of capital or

23   discount rate that reflects the relative risk of a company's cash flows.

24   The present value of a company's future cash flows, not its quarterly

25   earnings, determines its stock price (Rappaport 70:Last full ¶).

30. Rappaport teaches that business value depends on seven financial value drivers: sales growth, operating profit margin, incremental fixed capital investment, incremental working capital investment, cash tax rate, cost of capital, and value growth duration. While these drivers are critical in determining the value of any business, they are too broad to be useful for many operating decisions. To be useful, operating managers must establish for each business the micro value drivers that influence the seven financial or macro value drivers.

31. Rappaport teaches that an assessment of these micro value drivers at the business unit level allows management to focus on those activities that maximize value and to eliminate costly investment of resources in activities that provide marginal or no potential for creating value. Value driver analysis is a critical step in the search for strategic initiatives with the highest value-creation leverage. Isolating these key micro value drivers enables management to target business unit operations that have the most significant value impact and those most easily controlled by management.

32. Rappaport teaches that the first step of a value driver analysis is to develop a value driver "map" of the business. This involves identifying the micro value drivers that impact sales growth, operating profit margins, and investment requirements. Armed with a better understanding of micro value driver relationships, the next step is to identify the drivers that have the greatest impact on value.

33. Rappaport provides an illustrative table (Rappaport 172:Figure 9-3. Micro and Macro Value Drivers) that presents the sensitivity of

1   shareholder value to changes in selected drivers for retail as well as

2   industrial marketing (Rappaport 172:Top ¶).

3   34.   Rappaport teaches that most managers believe they can identify the

4   key drivers for their business. However, these drivers may in many cases

5   be appropriate for a short-term-earnings-driven business rather than an

6   organization searching for long-term value, Experience shows that value

7   driver sensitivities are not always obvious. Therefore, quantifying

8   sensitivities is a valuable exercise for both operating and senior

9   management (Rappaport 172:First full ¶).

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, (Fed. Cir. 2004).

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580, 146 USPQ 69, 70 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner

1   within the patent disclosure so as to give one of ordinary skill in the art notice of

2   the change).

3   *Obviousness*

4   A claimed invention is unpatentable if the differences between it and the

5   prior art are "such that the subject matter as a whole would have been obvious at

6   the time the invention was made to a person having ordinary skill in the art." 35

7   U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82

8   USPQ2d 1385, 1391 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148

9   USPQ 459, 466 (1966).

10   In *Graham*, the Court held that that the obviousness analysis is bottomed on

11 several basic factual inquiries: "[(1)] the scope and content of the prior art are to be

12 determined; [(2)] differences between the prior art and the claims at issue are to be

13 ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383

14 U.S. at 17, 148 USPQ at 467. *See also KSR Int'l v. Teleflex Inc.*, 127 S.Ct. at

15 1734, 82 USPQ2d at 1391. "The combination of familiar elements according to

16 known methods is likely to be obvious when it does no more than yield predictable

17 results." *Id.* 127 S.Ct. at 1739, 82 USPQ2d at 1395.

18   "When a work is available in one field of endeavor, design incentives and

19 other market forces can prompt variations of it, either in the same field or in a

20 different one. If a person of ordinary skill in the art can implement a predictable

21 variation, § 103 likely bars its patentability." *Id.* 127 S. Ct. at 1740, USPQ2d at

22 1396.

23   "For the same reason, if a technique has been used to improve one device,

24 and a person of ordinary skill in the art would recognize that it would improve

1   similar devices in the same way, using the technique is obvious unless its actual

2   application is beyond his or her skill." *Id.*

3   "Under the correct analysis, any need or problem known in the field of

4   endeavor at the time of invention and addressed by the patent can provide a reason

5   for combining the elements in the manner claimed." 127 S. Ct. at 1742, USPQ2d at

6   1397.

7   ANALYSIS

8   *Claims 69-103 rejected under 35 U.S.C. § 103(a) as unpatentable over Bielinski*

9   *and Brown.*

10   The Appellant argues these claims as a group. Although the Appellant

11   nominally contends each of the independent claims individually, each of the

12   contentions for the remaining independent claims refers back to the arguments for

13   claim 69.

14   Accordingly, we select claim 69 as representative of the group.

15   37 C.F.R. § 41.37(c(1)(vii) (2006).

16   We initially construe claim 69. We find that claim 69 is divided into two parts,

17   [1] and [2]. Part [1] recites the method steps, which, overall perform element [1.a]

18   integrating data, by step [1.b] using a neural network model to identify a fist set of

19   candidates, from which step [1.c] further identifies a set of drivers, and defines a

20   set of contribution summaries, finally, in step [1.d] creating network models with

21   the summaries. Thus, claim 69 contains three steps, [1.b-d] that are employed

22   within step [1.a]. Steps [1.b-d] are necessarily sequential because each of [1.c] and

23   [1.d] requires output from the preceding step. Part [2] identifies components used

1   in the steps in part [1], and thus limits the terms those components are used in

2   within part [1].

3   The Examiner found that Bielinski describes all of the elements of claim 69

4   except for the use of neural network models using the indicators and a portion of

5   the data to identify value driver candidates. To overcome this deficiency, the

6   Examiner found that Brown described valuation using neural networks and training

7   neural network models for aspects of financial performance using indicators. The

8   Examiner concluded that it would have been obvious to a person of ordinary skill

9   in the art to have combined Bielinski and Brown to take advantage of neural

10 networks to increase accuracy of models (Answer 3:Bottom ¶ - 4:Full page).

11   The Appellant contends that Bielinski[1] and Brown: (1) teach away from the

12 proposed combination; (2) would require a change in operating principle; (3) if

13 combined, would destroy the ability of one of the methods to function; (4) fails to

14 make the invention as a whole obvious; and (5) fails to meet any of the criteria for

15 establishing a prima facie case of obviousness (Br. 12:Third ¶).

16   *Teaching Away*

17   (1) The Appellant argues that Rappaport's description of only three market

18 value determinants, is incompatible with Brown's forty determinants (Br.

19 12:Bottom ¶).

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[1] The Appellant relies on Rappaport to support many of its arguments regarding Bielinski, apparently treating Rappaport as having been incorporated by reference within Bielinski, based on Bielinski's described usage of Rappaport's Shareholder Value Analysis (Bielinski, 30:First full ¶). The Brief somewhat confusingly attributes text actually found in Rappaport to Bielinski. In this opinion, when we refer to Rappaport's text, based on either the Appellant's contentions, or on our own analysis and fact finding, we attribute that text to Rappaport.

1   We initially find that here, as throughout the arguments in the Brief, the

2   Appellant has somewhat rhetorically attributed the teachings of Rappaport, and in

3   particular certain assertions within Rappaport, to Bielinski as a device to discredit

4   the combination of Bielinski and Brown. While Bielinski refers to the teachings of

5   Rappaport, as we noted in footnote [1], this does not necessarily mean that

6   everything taught and asserted by Rappaport is necessarily embraced by

7   Bielinski's teachings. In particular, Bielinski distinguishes its VBM technique

8   from Rappaport's SVA technique (FF 09).

9   As to the merits of the Appellant's argument, although Rappaport describes

10   that three factors determine stock prices (FF 29), we find that Bielinski describes

11   several market value drivers and implies there are more (FF 19). Also, we find that

12   Bielinski describes drivers of varying scope (FF 12), such that the broadest drivers

13   taught by Rappaport can be broken down into more drivers more directly linked to

14   operations.

15   On the other hand, the forty indicators taught by Brown that the Appellant

16   contends are incompatible relate to portfolio analysis across multiple companies

17   (FF 26) rather than analysis of a single company as taught by Bielinski (FF 04). It

18   is hardly surprising and totally irrelevant that an application comparing multiple

19   companies might use more indicators than a single company.

20   The Appellant has not sustained its burden of showing the Examiner erred.

21   (2) The Appellant argues that Bielinski's teachings imply an efficient market,

22   which is incompatible with an inefficient market implied by Rappaport (Br. 13:Top

23   ¶).

24   The Appellant bases this argument again on Rappaport rather than Bielinski as

25   such, pointing to Rappaport's description of a market risk quantifier, beta (FF 28).

1   The Appellant contrasts this with Brown's use of neural networks to select

2   individual stocks in a portfolio (FF 26). Thus, the Appellant has, as in the previous

3   argument, assigned an SVA teaching by Rappaport to Bielinski that is not

4   necessarily applicable to Bielinski's VBA, and compared Bielinski's single

5   company analysis to Brown's example of portfolio analysis. More to the point, we

6   find there is nothing fundamentally incompatible between a measure of market risk

7   and portfolio selection as suggested by the Appellant, particularly since it is widely

8   known that the purpose of portfolios is to manage risk. None of the three

9   references make any connection between their teachings and either an efficient or

10   inefficient market hypothesis.

11   The Appellant has not sustained its burden of showing the Examiner erred.

12   (3) The Appellant argues that Bielinski's reliance on long term cash flow

13   analysis is incompatible with Brown's short term analysis, and that Bielinski

14   specifically teaches away from the use of projections for any aspect of analysis

15   (Br. 13:Second ¶).

16   We again find that the Appellant compared Bielinski's single company analysis

17   to Brown's example of portfolio analysis, as the short term analysis pointed to by

18   the Appellant (Brown 56:reference to 80% monthly turnover) is again within the

19   investment analysis examples of Brown.

20   We further find that the Appellant is conflating the two distinct operations

21   performed by Bielinski's VBM. In particular, Bielinski first tests the sensitivity of

22   long term historical cash flow to different operating assumptions about past

23   operations (FF 10). Then Bielinski applies the results of this sensitivity analysis to

24   future strategic action (FF 11). Contrary to the Appellant's contention, Bielinski

25   specifically teaches the use of projections in this phase of the analysis.

1   Bielinski does not characterize the time frame for analysis of future action, but

2   we find that such projected time frames typically include relatively short term time

3   frames because of the inherent uncertainty in projections that increases with time

4   frame. We further find that there is nothing in Bielinski that would suggest that the

5   time frame for the projection phase of the analysis is incompatible with a shorter

6   time frame.

7   The Appellant has not sustained its burden of showing the Examiner erred.

8   (4) The Appellant argues that Rappaport's use of a tree based model topology

9   is incompatible with Brown's network topology (Br. 13:Third ¶).

10   The Appellant has made a broad contention of the incompatibility of these

11   methods without a specific showing of the nature of their incompatibility. The

12   Appellant bases this argument again on Rappaport rather than Bielinski as such,

13   contending that Rappaport implicitly teaches a tree methodology. We find that

14   nothing in Rappaport specifically refers to a tree based model topology. Rappaport

15   presents a figure of a tree diagram to represent the hierarchical nature of

16   organizational costs and activities (FF 33), but makes no representation as to how

17   this is incorporated within the model.

18   Even if Bielinski's VBM were to employ a tree based methodology, we find

19   nothing inconsistent with employing a neural network within each of the branches

20   of the tree's analysis. Further, we find nothing incompatible with assigning neural

21   network analysis to Bielinski's phase of finding driver candidates as in claim 69

22   element [1.b.] and assigning a tree based induction model to identify drivers as in

23   element [1.c.]. The Appellant has not made any contention otherwise.

24   The Appellant has not sustained its burden of showing the Examiner erred.

1   (5) The Appellant argues that Bielinski's usage of sensitivity analysis is

2   incompatible with Brown's neural network scoring for the same data (Br.

3   13:Bottom ¶).

4   We again find that the Appellant compared Bielinski's single company analysis

5   to Brown's example of portfolio analysis, as the scoring pointed to by the

6   Appellant (Brown 56:reference to ranking of future returns of stocks) is again

7   within the investment analysis examples of Brown.

8   Further, Bielinski applies the results of its sensitivity analysis to future strategic

9   action (FF 11). Similarly, Brown applies its results to future strategic actions (FF

10   22). We find nothing incompatible between using the results of sensitivity

11   analysis, their implications for future actions, and the results of neural networks for

12   suggesting future actions.

13   The Appellant goes on to argue that Bielinski and Brown are measuring the

14   same thing and there would be no point in using two methodologies to measure the

15   same thing (Br. 13:Bottom ¶). We find this is not an argument of incompatibility,

16   but of so much compatibility as to be redundant. We further find that Bielinski and

17   Brown base their analysis on different inputs (Bielinski using cash flows and

18   Brown using large databases) and the use of different analytical methods to

19   converge on a common result to reduce uncertainty is widely known and applied.

20   The Appellant has not sustained its burden of showing the Examiner erred.

21   *Changing Principle of Operation*

22   The Appellant argues that Bielinski and Rappaport's Shareholder Value

23   Analysis (SVA) would change Brown's neural network because it would use a tree

24   based analysis, acknowledge that the efficient market theory does not explain all

1 value changes, and acknowledge that cash flow explains only a portion of the value

2 of an enterprise (Br. 14:Top ¶). The Appellant further argue that Bielinski's Value

3 Based Management (VBM) would change Brown's strict reliance on historical

4 cash flow and the related prohibition against using projections of any kind (Br.

5 14:Second ¶).

6   We find that these contentions are all repetitions of those made under the rubric

7 of teaching away, *supra*, but couched as changing principles of operation, and our

8 findings are the same. The Appellant has made no contention specifically

9 demonstrating that the combination of Bielinske and Brown would necessarily

10 change the principles of their operation, particularly since Brown's neural network

11 might be used in performance of element [1.b.] and Bielinski's VBM in

12 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

13   The Appellant has not sustained its burden of showing the Examiner erred.

14 *Destruction of Ability to Function*

15   The Appellant argues that VBM requires that inputs to each node in a tree

16 arithmetically combine to produce an input to a higher level in the tree. The

17 Appellant contends that use of a neural network would destroy the ability to

18 arithmetically generate the numbers required at each tree node. The Appellant

19 similarly contends that the use of a tree would destroy the neural network's ability

20 to function (Br. 14:Bottom ¶ - 15:Top ¶).

21   We find that these contentions are all repetitions of those made under the rubric

22 of teaching away, *supra*, but couched as destroying the ability to function, and our

23 findings are the same. The Appellant has made no contention specifically

24 demonstrating that the combination of Bielinske and Brown would necessarily

25 destroy the abilities of their operation, particularly since Brown's neural network

1 might be used in performance of element [1.b.] and Bielinski's VBM in

2 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

3 The Appellant has not sustained its burden of showing the Examiner erred.

4 *Failure to Make Invention as a Whole Obvious*

5 The Appellant repeats the arguments regarding teaching away and concludes

6 that the invention is therefore not obvious as a whole (Br. 15:First full ¶).

7 We find that these contentions are all repetitions of those made under the rubric

8 of teaching away, *supra*, but couched as making the invention as a whole obvious,

9 and our findings are the same.

10 The Appellant has not sustained its burden of showing the Examiner erred.

11 *Failure to Make Prima Facie Case for Obviousness*

12 The Appellant argues (1) there is no evidence for the motivation to combine

13 the references; (2) there is no reasonable expectation of success for the same

14 reasons the combination would destroy their ability to function; and (3) the

15 combination fails to include optimization techniques (Br. 15:Bottom ¶ - 16:Top

16 three ¶'s).

17 We find that both Bielinski and Brown describe analytical techniques

18 employed to find drivers for improving organizational performance. Brown

19 teaches that neural networks may be used to analyze past business transactions so

20 they can understand customers' buying patterns, whereas Bielinski teaches how

21 VBM sensitivity analysis of past results offers clues to what can be done in the

22 future and which value drivers should receive the most attention to achieve optimal

23 rewards. Thus both are directed towards analysis of past business operations to

24 offer clues to changing future operations to improve business performance. It

1   would have been obvious to a person of ordinary skill in the art to have adapted

2   techniques from each of Brown and Bielinski to provide the advantages of each

3   technique in improving overall performance.

4   The Appellant has not sustained its burden of showing the Examiner erred.

5   *Reply Brief*

6   We find that the Appellant has made general allegations that the combination

7   of Bielinski and Brown fails to teach or suggest any of the claim limitations of

8   claims 77-103 for the first time in the Reply Brief. A statement which merely

9   points out what a claim recites will not be considered an argument for separate

10 patentability of the claim. 37 C.F.R. 41.37(c)(1)(vii). A general allegation that the

11 art does not teach any of the claim limitations is no more than merely pointing out

12 the claim limitations. Thus, these claims fall along with claim 69.

13 The Appellant has not sustained its burden of showing that the Examiner erred

14 in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over Bielinski

15 and Brown.

16   CONCLUSIONS OF LAW

17 The Appellant has not sustained its burden of showing that the Examiner erred

18 in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over the prior

19 art.

20 On this record, the Appellant is not entitled to a patent containing claims

21 69-103.

1   DECISION

2   To summarize, our decision is as follows:

3   • The rejection of claims 69-103 under 35 U.S.C. § 103(a) as unpatentable

4   over Bielinski and Brown is sustained.

5   No time period for taking any subsequent action in connection with this appeal

6   may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

7

8   <u>AFFIRMED</u>

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12   vsh

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